

**ABSTRACT OF THE DISCLOSURE**

The present invention provides a method of modifying a target substance by contacting the target substance with a catalyst that catalyzes the modification of the target substance. In a preferred embodiment, the method comprises labeling a  
5 target substance by contacting the target substance with a label and a catalyst that catalyzes the attachment of the label to the target substance. Preferably, the catalyst catalyzes selectively the reaction between a specific target molecule and a specific label. The attachment of labels may be used to inactivate a biologically active target substance or otherwise modulate its activity. Alternatively, the method may  
10 be used to label the target molecule with a detectable label suitable for the sensitive detection of the target substance.